



Climate & Environment Report 2022



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*Key areas of focus

Introduction

In 2022, we made significant progress towards implementing measures to reduce our carbon footprint, to better manage our waste output, and to promote sustainable construction practices and initiatives throughout the business.

While we have made commendable advances thanks to total dedication from our colleagues across the business, we recognise that there is still much work to be done, and we plan to continually work to improve our performance in the years to come. We are confident that with continued support from our business, our annual reports will demonstrate how our commitment to the Climate & Environment is having a positive impact on the communities within which we work.

Our Climate & Environment Strategy embeds mitigation and enhancement measures across our projects. These are reinforced by key performance indicators (KPIs) set within five interconnected pillars.

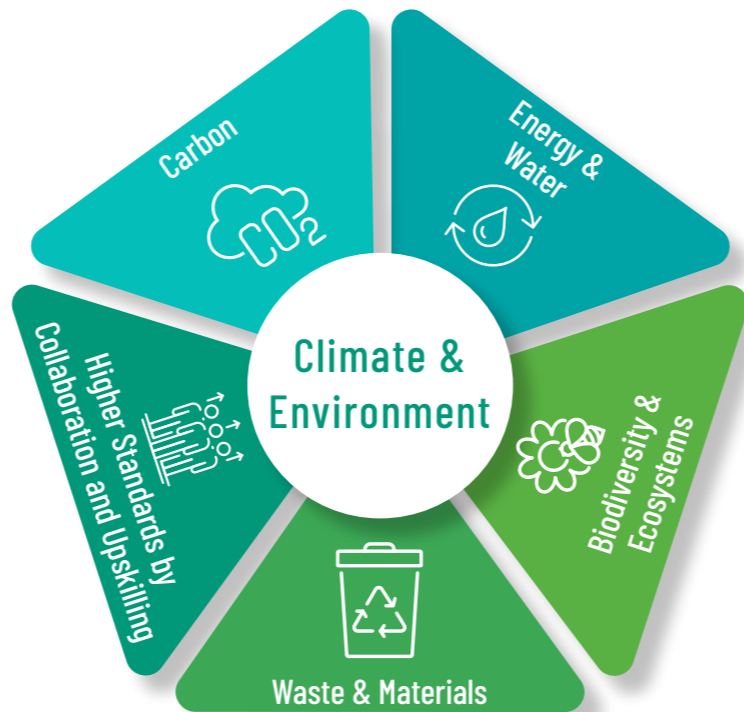
Our chosen KPIs have been carefully selected to align with our goals, to better monitor our environmental performance and to allow us to make more informed decisions that will help us track our progress towards a more sustainable future.

Within this year's Climate & Environment Annual Report, we have reviewed what was achieved in 2022 against the KPIs set out in our strategy.

I would like to thank our inspiring and motivated employees for their determination, continued support and involvement in our journey to building a better future.



Cathal Ward
Environmental Lead





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Carbon

1.1 Early Whole Life Carbon Assessment Status

From the earliest stages of inception, projects will carry out a Life Carbon Assessment (LCA) to identify key contributors and ways to improve the projects' carbon footprint. That LCA will feed into a Carbon Reduction Plan and updated to capture the evolutions of the project as well as good practices that are implemented by the team.

Target



Whole Life Carbon Assessments (WLCA) are now a mandatory requirement for all projects, at least at transfer stage.

This indicator goes beyond these mandatory requirements and **measures whether a WLCA was undertaken or commissioned at the appropriate stage.**

The first WLCA should be completed:

- before the start of RIBA Stage 3 if the design development is owned by Bouygues UK
- during the PCSA period if one was not completed by the client's team
- within three months upon appointment as a main contractor from the client.

Result



All our projects secured in 2022 completed a WLCA at transfer stage. Nevertheless, and as we're progressing on our carbon journey, **these were completed for reporting purposes and later than the criteria listed above.**

This indicator will be tracked and reported on from 2023 onward with a target of 100% secured projects complying with the criteria.



Carbon

1.2 Carbon Reduction Plan

All Carbon Reduction Plans include measures that will help the projects reduce their carbon emissions. We have developed our own carbon strategy and implementation plan at corporate level, giving guidance to project teams on **best practices as well as a pathway towards our target of reducing our carbon footprint.**

Target



In alignment with our Carbon Strategy, each project will develop its own Carbon Reduction Plan with the identification, implementation, and monitoring of key carbon reduction measures applicable to the works carried out. 100% of projects on site and in development are eligible to have a Carbon Reduction Plan in place and live.

Result



In 2022, our **Pentre Awel project** was a successful pilot for this initiative in setting up its own bespoke Carbon Reduction Plan. Although not all projects had Carbon Reduction Plans in place in 2022, the example of **Pentre Awel**, alongside the engagement the **Climate and Environment team** has had with all staff throughout the year, has encouraged all projects to start developing their own versions.

As the implementation of such Carbon Reduction Plans becomes a mandatory requirement on all projects in 2023, we target 100% compliance.



Carbon

1.3 Corporate Carbon Emissions Scopes 1 & 2 (1/2)

This entails the carbon emissions linked to our consumptions of fuels (liquid and gaseous fuels) on our sites, in our offices as well as in our fleet.

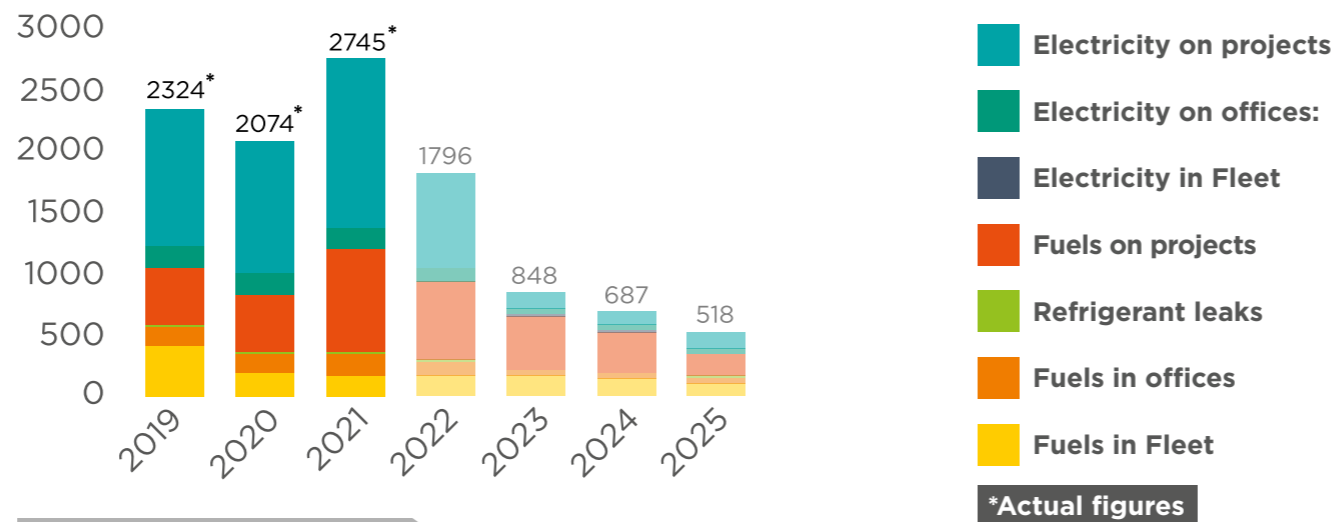
It also accounts for our purchase of electricity, heating and cooling networks as well as any refrigerant leaks in the systems on our premises.



Target Our ambition is to become a Net Zero business by 2025 on scopes 1 & 2 and we have defined progressive yearly targets in order to achieve this. Within year 2022, we also realised that the defined targets were unrealistic, and we had to reset them. They didn't reflect the progressive nature of our transformation and initially considered a sharp change in our practices from one day to another while the strategy was set up.

For 2022, our ambitions towards Net Zero are translated within our scopes 1 & 2 carbon reduction plan to a target of 1,796 tCO₂e.

Scope 1 & 2: (in tCO₂e/£m)



Continued on next page



Carbon

1.3 Corporate Carbon Emissions Scopes 1 & 2 (2/2)

Result



From our 2021 baseline, a series of measures were developed and implemented to respond to the challenge.

2021: 2,745 tCO2e

2022: 1,271 tCO2e

At the end of 2022, we had reduced our emissions under these scopes by more than 55% compared to the previous year and has surpassed some of the initial targets.

This means that the implementation of some measures exceeded what we set out in the strategy, namely the use of HVO as well as the shift towards green energy.

On the other hand, some actions require a further improvement, particularly the shift towards electric plant on site, electric vans for our operations, and the development of business cases demonstrating the potential for solar panels on our sites.



Carbon

1.4 Upfront Embodied Carbon (1/3)

Upfront embodied carbon is part of Scope 3 upstream; it groups the mining, extraction and transport of raw materials as well as the manufacturing and transportation to site of the products we procure, and that are components of the buildings we deliver. **Upfront embodied carbon covers the whole chain of activities up to delivery** and therefore also includes the carbon linked to the construction activities on site as well as the transport and treatment of the waste that is generated (building life cycle stages A1 – A5 excluding sequestration in line with BSEN15978).

Target



Targets from recognised industry standards can be found in the Embodied Carbon Target Alignment published by LETI (London Energy Transition Initiative) where band C and better is considered best practice.

Resi 2021: 637 kgCO₂e/m² GIA

Student Accommodation 2021: 553 kgCO₂e/m² GIA

Data Centre (shell & core) 2021: 732 kgCO₂e/m² GIA

Result



Resi 2022: 686 kgCO₂e/m² GIA

→ +8% from 2021

→ Band E

Office 2022: 655 kgCO₂e/m² GIA

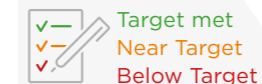
→ Band D

On a year-to-year basis, the carbon footprint of our residential projects has increased by 8%.

It is worth noting that only 2 residential projects were accounted for in 2022 therefore the range of data for the year is limited and the concept of a 'trend' cannot really be reflected here.

All projects, residential and offices, are rated D or E onto the LETI scale where best practices are a C rating or better.

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Carbon

1.4 Upfront Embodied Carbon (2/3)

Although several reasons can explain this result, our company must significantly improve and design low carbon solutions for our clients.

Our Ebury Bridge Estate project includes precast concrete, triple glazing and sophisticated Mechanical and Electrical features. Some of these support energy efficiency or design quality, others are sometimes the result of a “Business as Usual” approach to design. These now all inform a lessons learnt process with the client.



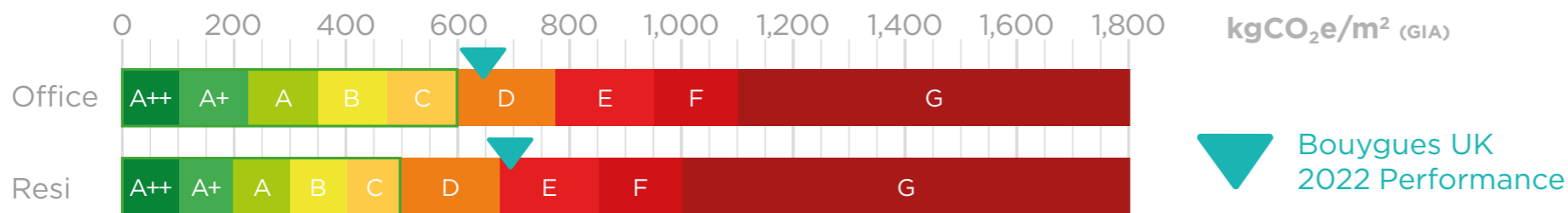
Our Wornington Green project is the first project where we have outsourced to a third party (in this case, Darren Evans). The level of detail and engagement with our consultant resulted in a push towards an extremely thorough analysis, with the WLCA covering a wider scope than other studies conducted previously. The analysis has also given our teams and Darren Evans the opportunity to collaborate further and issue a white paper as a contribution to the industry.

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Carbon

1.4 Upfront Embodied Carbon (3/3)

Upfront embodied eagle eye Carbon A1 - A5 (exc. Sequestration)



Expected Good Practice are Band C and better.

The graph above show that our company has now moved away from business as usual (Band E/F) and is progressing on its decarbonisation journey. However, they also show that **we are not yet aligned with good practices and should give much more attention to carbon.**

LETI targets are ambitious by nature, to inspire the industry to perform better. It is also believed that our technical expertise and art of questioning can lead to a more robust and complete approach to carbon. This approach leads to more carbon being accounted for than a less thorough approach would.

The BECD (Building Embodied Carbon Database) will be released in 2023 and will give more information on benchmarks and the current status of the industry in this respect.

2022 has enabled our company to learn, grow and refine our understanding of carbon. **The studies undertaken in the year have been more thorough than ever before. This has contributed to a much greater awareness at all levels throughout the business.**

It would come as no shock to us that, as the industry itself becomes more aware of its carbon implications, an increase in accuracy and accounting of carbon content will likely occur. It is also expected that this phenomenon is likely to plateau before 2025 in order to actually mirror the efforts made on the road to Net Zero.



Carbon

1.5 Embodied Carbon

Embodied carbon is made up of upfront embodied carbon and adds this to the carbon linked to the in-use and replacement of materials throughout the lifespan of the projects we deliver as well as the end-of-life stage (demolition, transport, treatment) of these assets. It includes building life cycle stages A1 – A5, B1 – B5, C1 – C4 including carbon sequestration under BSEN1597.

Target



Targets from recognised industry standards can be found in the Embodied Carbon Target Alignment published by LETI (London Energy Transition Initiative)

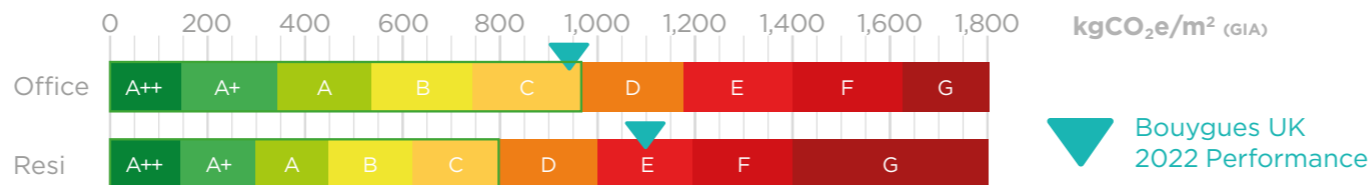
- Resi 2021:** 1070 kgCO₂e/m² GIA
- Student Accommodation 2021:** 915 kgCO₂e/m² GIA
- Data Centre (shell & core) 2021:** 746 kgCO₂e/m² GIA

Result



- Resi 2022:** 1097 kgCO₂e/m² GIA
→ +2.5%
→ Band E
- Office 2022:** 945 kgCO₂e/m² GIA
→ Band C

Upfront Embodied Carbon A1 – B5, C1 – C4 (inc. Sequestration)



Expected Good Practice are Band C and better.

The comments made on the upfront embodied carbon indicators apply here. We are expecting our business and the whole industry to increase their understanding of carbon and capture a more accurate picture of the emissions of their projects towards 2025.

It is expected that the efforts made to reduce emissions are likely to become visible as the industry gains maturity.



Carbon

1.6 Operational Carbon (1/2)

Operational carbon is part of scope 3 downstream; it relates to the energy consumption of building in-use and operation (building life cycle stage B6). Carbon emissions of operational water consumption (building life cycle stage B7) were not included in monitoring and reporting for 2022.

Target



Currently, no benchmark has been set for operational carbon intensity as the meaningful performance indicator widely accepted by the industry is the operational energy use of buildings (in kWh/m² GIA/year), which is reported in section 2.2.

It could be appropriate to consider a target in line with the operational use of buildings (section 2.2) attached to a carbon factor based on electrical power source, reflecting **a willingness to improve the efficiency of our buildings while moving away from fossil fuels.**

In this case a residential scheme targeting a good practice Energy Use Intensity of 60kWh/m²/year would emit 8.2kgCO₂e/m²/year on an electrical basis, an office scheme targeting a good practice Energy Use Intensity of 75kWh/m²/year would emit 10.2kgCO₂e/m²/year on an electrical basis.

As a business, we are committed to steadily improving our performance, reducing the emissions of the buildings we deliver year after year.

Resi 2021: 11.2 kg CO₂e/m² GIA/year

Student Accommodation 2021: 14.0 kg CO₂e/m² GIA/year

Result



Resi 2022:
9.1 kg CO₂e/m² GIA/year

Office 2022:
7.3 kg CO₂e/m² GIA/year

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 Target met
 Near Target
 Below Target

Carbon

1.6 Operational Carbon (2/2)

In 2022, residential projects operational carbon intensity is 18% lower than in 2021, nevertheless they don't yet reach a good practice level in alignment with targeted Energy Use Intensities.

A few reasons can explain the improvement from 2021:

In 2021, one of the residential projects was installed with gas boiler. All residential projects in 2022 shifted to electric sources, resulting in less operational carbon emissions. Additionally, we had a carbon intensive student accommodation project in 2021 where 2022 only account for pure residential projects which are in most cases less carbon intensive than student accommodation projects.

There is also a trade-off between embodied carbon and operational carbon in building design. The 'Fabric First' approach requires better thermal insulation of building envelopes, leading to lower operational carbon emissions, however better-performing envelopes also likely mean higher embodied carbon intensity. **A holistic evaluation on whole life carbon is, therefore, needed for optimum design choice.** One example is Ebury Bridge Estate, one of our current urban regeneration projects. It has adopted triple glazing for better insulation performance, which has higher embodied carbon than double glazing. However, this triple glazing will also boost building energy efficiency, lead to energy saving and reduce operational carbon emissions over the 60-year building service life.



Carbon

1.7 Corporate Carbon Emissions Scope 3 (1/2)

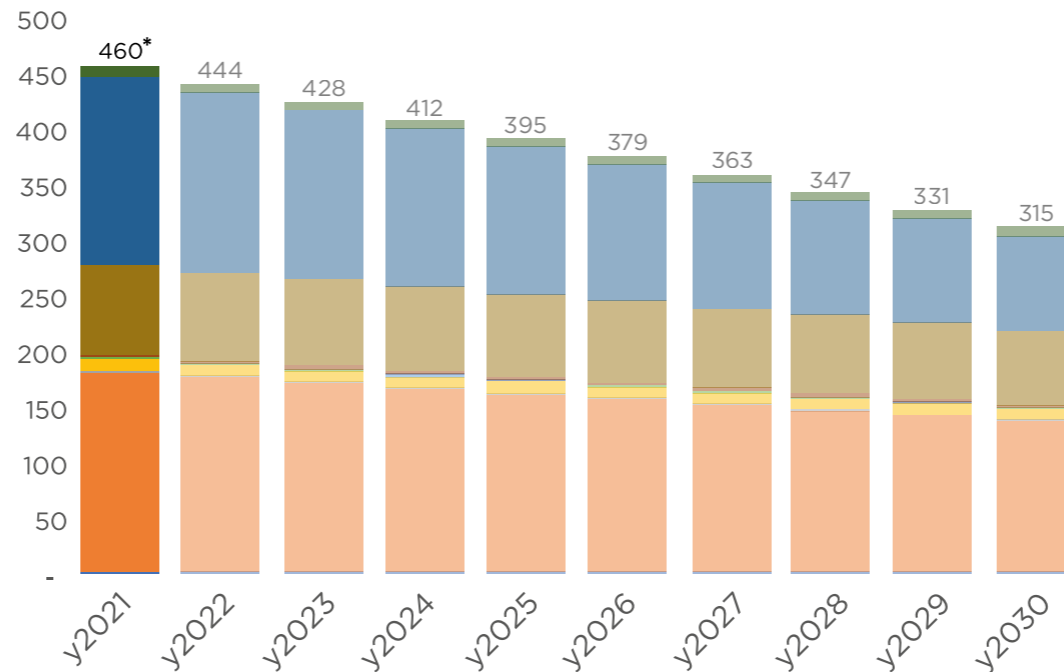
Scope 3 emissions include the embodied carbon and operational carbon for all our projects. It also captures the procurement of services throughout the business as well as goods not otherwise integrated within our embodied carbon reporting (e.g. head office consumables). The scope also covers the emissions linked to our fleet (not their consumptions that are accounted for in scopes 1&2) as well as business travel and employee commuting. In other words, **scope 3 include all sources of carbon emitted by others throughout our value chain and on all our activities.**

The indicator expresses the amount of carbon emitted in kilograms for each £ million of turnover for the selected period.



The graph below reflects our trajectory towards 2030 as well as its linear application for each year. For 2022, we targeted an intensity of 444kgCO₂e/£m or turnover.

Scope 3: (in tCO₂e/£m)



- 1. Purchased goods and services
- 2. Capital goods
- 3. Fuel and energy related activities (not included in scope 1 or scope 2)
- 4. Upstream transportation and distribution
- 5. Waste generated in operations
- 6. Business travel
- 7. Employee commuting
- 8. Upstream leased assets
- 9. Downstream transportation and distribution
- 10. Processing of sold products
- 11. Use of sold products
- 12. End-of-life treatment of sold products
- 13. Downstream leased assets
- 14. Franchises
- 15. Investments

*Actual figures

Continued on next page

Carbon

1.7 Corporate Carbon Emissions Scope 3 (2/2)

Result



2021: 460kgCO₂e/£m - Baseline

2022: 405kgCO₂e/£m - 447kg/£m (incl. inflation)

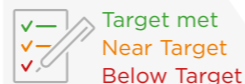
Our actual intensity in 2022 was 405kgCO₂e/£m.

Considering the BCIS General Building Cost Index for inflation (+10.6%pa to September 2022), it can be modelled as 447kgCO₂e/£m which **makes a 3% improvement from 2021.**

The results of 2022 don't quite reach the target of 444kgCO₂e/£m, equating to a reduction of 4.5% from 2021.

This result shows a slight improvement which remains below the target for a linear progression towards a 30% reduction by 2030 (444kgCO₂e/£m). It can be expected that our progress towards our 2030 targets is made through steps that also mirror the evolution of the industry standards e.g. revision of standards of calculations, update of EPDs from major suppliers, carbon factors update from compliance models.

The scope 3 carbon intensity per £m in 2022 reflects the results obtained on embodied carbon and operational carbon discussed in the previous sections.





2.1 Corporate Energy Use _____ 18

2.2 Operational Energy Use _____ 19

2.3 Water Use _____ 20

Energy & Water

2.1 Corporate Energy Use

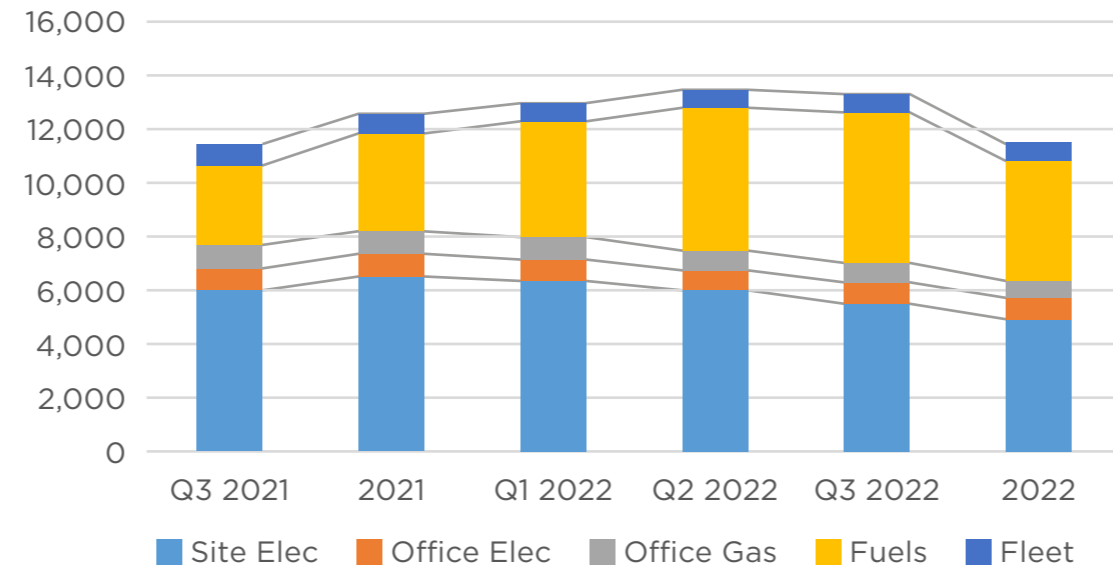
Energy reduction goes hand in hand with carbon reduction. To reduce our impact and our generation of greenhouse gases, **we must monitor, report, and improve our energy consumption across the business.**

Target



We have targeted to reduce our energy consumption year on year.

Bouygues UK's Energy Consumption (in MWh)



Result



2021: 12,550 MWh = 2.595MWh/£100k turnover (our baseline)

2022: 11,482 MWh = 3.001MWh/£100k turnover (3.277MWh/£100k turnover (incl. inflation))



Between 2021 and 2022, Bouygues UK reduced its overall energy consumption by 8.5%.

However, as an intensity on turnover, it makes an increase of 15.6%.

Considering inflation, it makes a 24% increase (BCIS General Cost Index +9.2%pa in 2022).

There has been a decrease in energy associated to all indicators except for fuel consumption. This is due to projects not being able to connect to the grid at the start of works on site, meaning they are reliant on generators for power until a connection is made, losing efficiency, and burning direct fossil fuels.

We will continue to work with our energy broker to establish a connection to the grid as early as possible to ensure that we are not reliant on generators. We will continue to use smart technologies like Smart Impulse and GAIA to obtain a better understanding of our energy usage and automatically switch off key energy consuming components when not in use. We will also raise awareness of our main contributors in order for behaviours to change and reduce the energy we use on our sites.

Energy & Water

2.2 Operational Energy Use

Operational energy use (kWh/m²/year) is the energy consumption for building we deliver that are then in-use and operation (Building Life Cycle Stage B6), including both regulated and unregulated energy consumption. It is a key metric to measure building energy efficiency.



Target

Operational energy use in (kWh/m² GIA/yr) per year was measured and compared against an industrial benchmark – RIBA 2030 Climate Challenge targets. In 2022, we defined the baseline as a RIBA ‘Business as usual’ scenario, with good practice to be in line with RIBA 2025 targets and the best practice to be in line with RIBA 2030 targets. **Given the improvement of building energy efficiency, our own criteria will be reviewed and adjusted to reflect the evolution of targets set by industry bodies.**

RIBA 2025 Targets, Bouygues UK good practice	Operational Energy Use (kWh/m ² GIA/yr)
Residential	60
Offices	75

Result



Resi 2021: 68.4 kWh/m²GIA/year

Student Accommodation 2021: 85.9 kWh/m²GIA/year

Resi 2022: 66.4 kWh/m²GIA/year

Office 2022: 53.9 kWh/m²GIA/year

Comparing with RIBA targets, our residential operational energy use for 2022 is significantly better than a baseline (Business as usual), and close to good practice (targets 2025).

Our office operational energy use performance is at the best practice level.

Compared with 2021, the operation carbon from our residential projects for 2022 reduced by 3%. As discussed in previous sections, possible reasons include full heating electrification of residential projects on energy efficient systems (heat pumps) and improvement of building fabric.



Energy & Water

2.3 Water Use

With more frequent, prolonged, and severe droughts projected in the coming years, water shortages will become more and more prevalent within the UK. It is vital that we monitor and reduce our water usage across all our projects to minimise the impact that we have on the environment around us.

Target



From 2023 onwards, we have set the target to reduce our water consumption year on year.

Result



2021: 33,229.9m³ = 6.87m³ per £100k turnover

2022: 25,656.9m³ = 6.71m³ per £100k turnover (7.32m³ per £100k incl. inflation)

Between 2021 to 2022, we reduced our overall water consumption by approximately 23%.

However, against our turnover which also decreased, it represents an intensity reduction of only 2.5%. Taking into consideration inflation, specifically that “From one year to another, more turnover is required to undertake the same amount of works”, it can be considered that our water usage as increased in intensity by 6.6%.

As a minimum requirement, **all new projects must have water submeters installed to monitor both the office and the site activities**, allowing us to have a breakdown of the water use so we can implement water reduction plans to help us reach our targets.

We have installed water leak detection equipment on 71/72 The Kingsway, to reduce consumption of potable water through the effective management and monitoring of the projects water usage. To date Kingsway has generated 4.83m³ per £100k turnover, which underlines the importance of implementing smart technology to help us achieve our targets.

We will continue to work with our supply chain to implement best practices that will help us improve our performance and reach our targets.





Biodiversity & Ecosystems

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3.2 Enhanced Biodiversity _____ 23

3.3 Green Projects (urban Green Factor) _____ 24

3.4 Environmental Incidents _____ 25

Biodiversity & Ecosystems

3.1 Biodiversity Plan

The **Biodiversity Action Plan (BAP)** is a new KPI set out by the Climate & Environment team to ensure that all projects set targets related to ecology and biodiversity, **aiming for a positive contribution to the protection, enhancement, creation, and management of biodiversity.** This is responding to several national and local policies such as London Plan’s Policy G6 – Biodiversity and access to nature, the Environment Act 2021 (England), Environment Act 2016 (Wales) and others.

Target



At Bouygues UK, we have a corporate target for 100% of our projects (where we have design implication prior to RIBA Stage 2) to have a Biodiversity Plan in place.

Before 2022, this target did not exist. However, for the purposes of this Annual Report, projects have been reported on against their **Preliminary Ecological Appraisal (PEA)**.

Result



100% of live projects on site have undertaken a Preliminary Ecological Appraisal, carried out by a Suitably Qualified Ecologist, to demonstrate the pre and post development ecological value of the site (please refer to section 6.2 below). Following these appraisals, projects have been provided a set of recommendations regarding enhancing biodiversity.

Moving forward, we will develop appropriate monitoring tools so that each project can ensure a Biodiversity Action Plan is in place in addition to the PEA.



Biodiversity & Ecosystems

3.2 Enhanced Biodiversity

The **Biodiversity Net Gain (BNG)** is a new KPI that aims to leave the natural environment in a **measurably better state than it was before**. It responds to the Environment Act 2021 which comes into force in November 2023.

Target



The target is to achieve at least an increase of 10% BNG in 100% of our projects (where Bouygues UK has design implication prior to RIBA Stage 2).

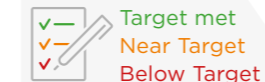
Result



As this target did not exist prior to 2022, and for the purposes of this report, projects have been reported on against their Change in Ecological Value which demonstrates the biodiversity enhancement performance of our projects. This KPI is extracted from BREEAM's Post Construction Assessments and was required for commercial and multi-residential developments only.

All projects reported in 2022 have been awarded at least one BREEAM credit under the relevant issue, with half of them demonstrating no negative change and the other half demonstrating a minimal change in the ecological value of the sites post development.

Moving forward, and with the 10% increase in BNG target, we will ensure that all sites have a positive impact on biodiversity.



Biodiversity & Ecosystems

3.3 Green Projects

Urban Greening Factor (UGF) is a new KPI introduced by the Climate & Environment team in 2023. It is calculated at early design stages to inform decisions about appropriate **levels of greening in new developments.**

Target



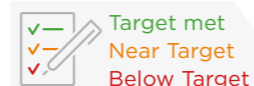
We have a corporate target to improve biodiversity each year and **UGF will be used as an indicator to measure our projects' performance.** 100% of the delivered projects (where Bouygues UK has design implication prior to RIBA Stage 2) will demonstrate compliance with national and local policies regarding UGF. Bouygues UK sets as a minimum target, and in line with London Plan's Policy G5, an UGF score of 0.4 for residential and 0.3 for commercial developments. However, national, and local policies should be followed on a case-by-case basis.

Result



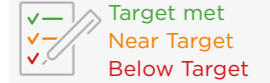
The UGF policy was recently adopted and not reported against in 2022.

Nevertheless, from 2023, we will ensure that all new projects within the business are in line with the UGF target and demonstrate compliance at early design stages and before planning application.



Biodiversity & Ecosystems

3.4 Environmental Incidents



Environmental incidents can have a serious consequence for both the environmental and human health. Environmental incidents include accidental spills of hazardous materials, emissions of pollutants into the air or water, and damage to natural habitats or protected species. Within Bouygues UK **we have numerous environmental standards in place that are to be followed and applied to reduce the risk of these environmental incidents occurring.**

We rate environmental incidents at three different levels: minor, significant, and major.

Target



We have targeted to generate no significant environmental incidents, and, as a good practice to generate no incident at all.

Result



In 2021 we reported a total of 7 minor incidents and 1 significant incident.

In 2022, we reported a total of 6 minor incidents which is a decrease of 2 compared to 2021.

Whilst we have reached our target of reporting no significant environmental incidents, we have reported 6 minor environmental incidents in 2022. Thankfully these environmental incidents were addressed at the correct time before they could be escalated or worsen to a significant or a major rating.

The process for identifying, reporting, and managing environmental incidents has been improved in 2022, introducing the process to identify potential environmental hazards (in the form of a positive interventions) and near misses, before the hazard escalates into an incident.



4.1 Waste Intensity _____ 27

4.2 Construction Waste Diversion from Landfill _____ 29

4.3 Circular Economy Statement _____ 30

4.4 Sustainably Certified Products _____ 31

4.5 Sustainably Sourced Timber _____ 32

Waste & Materials

4.1 Waste Intensity (1/2)

One of the most significant environmental challenges faced by the construction industry is the generation of waste. **Reducing the waste generated by our construction activities is an essential step towards building a more sustainable future.** Minimising waste can reduce costs associated with disposal and can also provide opportunities for the recovery and reuse of valuable resources.



Target

We have set a target to reduce our corporate waste year on year as a business, with the goal of 40% by 2030. **Our projects are required to achieve the waste credits that have been set out in BREEAM and Code for Sustainable Homes.**

Our projects are expected to achieve $\leq 11.1T$ non-hazardous construction waste / 100m² GIFA*

*Where projects are targeted for Code for Sustainable Homes, they are be required to meet a minimum of: ≤ 8.5 / 100m² GIFA.

Result



Of the projects we handed over in 2022, we achieved an average of: 11.3T/100m² GIFA.

In 2021, Bouygues UK produced a total of 17,179 tonnes of non-hazardous construction waste, equating to 3.56T per £100k turnover.

In 2022, Bouygues UK produced a total of 13,714 tonnes of non-hazardous construction waste, equating to 3.58T per £100k turnover (3.91T/£100k turnover including inflation +9.2%pa BCIS General Cost Index 2022)

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Waste & Materials

4.1 Waste Intensity (2/2)

In the past year, we have changed how we record our waste within the business; previously we had measured waste generation in m³, which was an estimated method of measuring: A percentage was taken from the total waste container's volume to give us the m³ of the actual waste produced. The method was very approximate and somewhat subjective.

We have since worked with our supply chain to obtain accurate tonnage data for the waste generated on our sites. Our waste contractors now weigh the waste that enters their facility, **providing us with an accurate report of the amount of waste produced from all projects.**

Although the overall amount of waste in 2022 was reduced from 2021 by 20%, it should be noted that as an intensity on turnover, this makes a slight increase of 0.5% (3.58 vs 3.56).

Considering inflation, our waste indicator therefore shows an increase of approximately 10.6% compared with 2021.

Waste generated on our projects fluctuates depending on the phase and type of works being carried out. In 2022, we had several projects entering their final stage of works and it is recognised that these phases are more waste intensive than others. The phasing of projects in 2022 therefore likely means an increase in the intensity of non-construction waste produced in 2022 compared with 2021.

Nonetheless, **we are committed to reducing non-hazardous construction waste produced on our sites**, and this is where our site waste management plans (SWMPs) and engaging with our supply chain will assist with delivering better results for 2023.

To form a better understanding of methods used to reduce waste generation on site, we have started to implement 'designing-out waste' workshops at early design stage with key stakeholders. This is allowing us to identify waste minimisation practices in design and throughout construction that can be implemented on upcoming projects.



Waste & Materials

4.2 Construction Waste Diversion From Landfill

It is important to ensure that the waste generated on our projects is treated in a way which enables it to be reused and recycled.

With the help our procurement team, we have identified waste contractors that can effectively treat our waste to ensure that minimal ends up in landfill.

Target



We have set a target of **98% of our non-hazardous construction waste to be diverted from landfill** with a long-term target of 100% diversion.

Result



2021: 97.3%
2022: 99.1%

We have surpassed our target of diverting 98% of our non-hazardous construction waste from landfill. We have partnered with companies that offer alternative ways of treatment, to ensure that the waste we produce does not end up in landfill. Community Wood Recycling and Protec are mandated across all our projects ensuring the reuse of our waste after it leaves our sites.

We must continue to work with our subcontractors and supply chain partners to ensure they are aware of our targets and working in line with our SWMPs. We will also source other innovative partnerships in order to progress towards 100%.



Waste & Materials

4.3 Circular Economy Statement

A circular economy approach focuses on **reusing, recycling, repairing and reducing** all kinds of materials, water, and energy streams within our activities. Our Circular Economy Statement is **bespoke for each project**. This allows site teams to identify and highlight opportunities to apply a Circular Economy on each development.

Target



Our corporate target in 2023 is to have a Circular Economy Statement produced for 100% of our live projects where we have a design implication prior to RIBA Stage 2. Our corporate target responds to national and local policies including London Plan’s Policy S17 – Reducing Waste and Supporting the Circular Economy. The GLA provides guidance on preparing a Circular Economy Statement which is required to be produced prior to planning submission.

Result



In 2022, our projects hadn’t particularly produced a Circular Economy Statement at early design stage.

However, in 2023, in line with our corporate target, it is our intention to see all our projects define and monitor the implementation of their Circular Economy Statements.



Waste & Materials

4.4 Sustainably Certified Products

In 2023, the Climate & Environment team set a new target regarding the materials and products we specify and install on our projects. This target is related to the selection of products with a **low level of negative environmental impacts across their supply chain.**

Target



We have a corporate target of 90% of construction products specified and installed to be sustainably certified in line with recognised sustainability assessments requirements.

For example, BES6001 Responsible Sourcing of Construction Products certificate and ISO14001 Environmental Management System certificate)

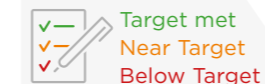
Result



Overall, 86% of all construction products assessed for applicable projects were sustainably certified.

As this KPI did not exist prior to 2022, not all Bouygues UK project teams have monitored the percentage of sustainably certified products. For the purpose of this year’s report, projects have been reported on against their BREEAM’s Materials Performance Assessment. This indicator is extracted from BREEAM’s Post Construction Assessments and was required for commercial and mixed-residential developments only.

There is still room for improvement if we are to reach the 90% target of sustainably certified products in 2023. Our Sustainable Procurement Plan as well as our Procurement Policy have been updated to reflect our corporate target and **ensure that 90% of procured products are sustainably certified across all projects.**



Waste & Materials

4.5 Sustainably Sourced Timber

We recognise the importance of sustainability sourced timber. Through procuring timber that is FSC & PEFC certified, **we can ensure that the timber delivered to our projects has been harvested in a credible manner which impedes deforestation and is conflict free.**

Target



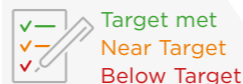
We are committed to procuring 100% certified FSC/PEFC timber.

Result



1,650m3 of timber material was delivered to site and monitored through SMART Waste for all live projects in 2022, of which 99.9% was certified as FSC/PEFC.

We have not been able to reach our target of 100% certified timber in 2022. Upon investigation, this was due to subcontractors procuring timber through a supplier that had no timber chain of custody certification in place. While the supplier could prove that the timber had been procured from an FSC/PEFC source, the lack of certification by the supplier themselves broke the last link in the chain of custody. The timber can be recorded as coming from a legal and sustainable source, however full timber chain of custody cannot be claimed.





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Higher Standards by Collaboration and Upskilling

5.1 Engagement with Supply Chain on Climate & Environment

We recognise the importance of the partnerships we can create throughout our value chain through **collaboration and active engagement** around environmental matters. The Supply Chain Sustainability School (SCSS) is one of our partners playing an educating and supporting role to the industry to work more sustainably.

Target



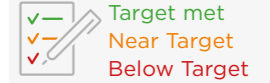
No target was set in 2022 to monitor the engagement of our supply chain with the SCSS.

We are a member of the SCSS and plan to work with the school in 2023 to establish meaningful corporate KPIs that will allow us to monitor how our supply chain interacts with the school and with us.



 Target met
 Near Target
 Below Target

Higher Standards by Collaboration and Upskilling



5.2 Staff Trained on Climate Related Matters

We recognise the importance of training and upskilling our staff on climate and environment relating topics.

Target



We target 100% of our staff to be trained on Climate Related matters through our Learning and Development platform BY Learn.

Result



63% of our staff completed the E-Learning modules in 2021.

In 2022, this coverage went up to 83% of our staff.

The 83% only considers the training modules that are available on our internal online learning platform BYLearn.

Two mandatory climate modules are present on ByLearn:

- Act for the climate
- Living together for our planet

We have been able to deliver training in many other forms, including:

- Carbon workshops
- Spill-response training
- Environmental Toolbox Talks
- Climate and Environment ABCs, averaging at one issued a month
- Site Environmental Awareness Training Scheme (SEATS) courses
- Bouygues UK knowledge exchange webinars
- Climate Fresks

In 2022, we delivered a total of 3,646 hours of inhouse environmental training.

In 2022, carbon workshops were a new form of training carried out across Bouygues UK. The

sessions were all about engagement; an open discussion about the status of our world, global warming, greenhouse gas emissions and what we can do as individuals from a personal and professional perspective to make a change. **Over 350 delegates contributed to the workshops to reduce carbon for our business.** From green fuels to packaging, from localism to lean design, an extensive range of proposals were made by the teams, covering all carbon scopes.

Our knowledge exchange webinars were organised in collaboration with our Learning & Development team throughout the year, as an opportunity to spread awareness virtually. Three topics were discussed in 2022 relating to Climate and Environment:

- Carbon Scopes 1&2 Definitions, Reductions, Progress to Date and... You
- We need to talk about Biodiversity!
- Recycling Week: Waste in Construction

Across the three webinars, we had a total 205 attendees. The Climate & Environment team will continue to hold a variety of a different learning opportunities in 2023 to spread awareness and knowledge on key topics.

Higher Standards by Collaboration and Upskilling

5.3 Sustainably Certified Projects

Bouygues UK has extensive experience in designing and building in line with sustainable development certification schemes, such as BREEAM.

BREEAM is a sustainability assessment method and certification scheme for buildings widely recognised in the industry. It provides a holistic measurement over management, health and wellbeing of occupants, energy, transport, water, materials, waste, land use & ecology and pollution. Delivering BREEAM certified projects proves **Bouygues UK’s commitment to the climate and environment as well as our commitment to going beyond the client brief to deliver truly sustainable buildings.** Other applicable standards are HQM, CfSH, WELL, Passive House.

Target



Bouygues UK’s targets that 100% of the eligible projects are to obtain a BREEAM Excellent certification equivalent or above.

In 2021, the following projects were certified:

- Castle Park View - CfSH
- Mount Pleasant - CfSH
- Essex Phase 1 - BREEAM Very Good
- UCLH - BREEAM Excellent
- Leigh Academy - BREEAM Excellent

Result



In 2022, the following projects were sustainably certified:

- West Hub, BREEAM UK New Construction 2014, Excellent (72.33%)
- Canterbury Riverside Student Accommodation, BREEAM UK New Construction 2014, Very Good (59.43%)
- Cardiff Innovation Campus, sbarc Building, BREEAM UK New Construction 2014, Very Good (63.4%)

The standards of these projects are high but not yet at the expected level. Only 33% of the certified projects are reaching a level of Excellent or above. **Is it important that, beyond the clients’ requirements, a BREEAM Excellent rating is targeted and achieved on all our projects.**



Higher Standards by Collaboration and Upskilling

5.4 Sustainable Initiatives

We strive to incorporate sustainable ways of working across all our projects. We have identified areas in our operations where initiatives can promote this attitude, concerning the reduction of waste, carbon, and the impact our business has on the environment.

Target



We aim to increase the availability of sustainable initiatives year on year and to ensure that they are implemented across all projects, where feasible.

Result



Of the eligible projects that were able to implement these solutions, we had 5 available initiatives listed below and a 67% uptake of the solutions in 2022.

Sustainable solutions that were available for projects to implement in 2022 include:

- Reuse of timber schemes, for example Community Wood Recycling and on-site salvage yards
- Closed loop re-manufacturing schemes for temporary protection, like Protec
- Recycling Schemes for the more hard to recycle wastes such as Refactory
- ‘Green Hoarding’ like EnviroHoard
- Smart Technologies such as Smart Impulse and GAIA

Please note, not all solutions are an option for all sites.

In 2023, we will continue to encourage our projects to implement these solutions and we will continue to build upon the library of solutions that we currently provide.



Higher Standards by Collaboration and Upskilling

5.5 Environmental Inspection Regime

All projects within Bouygues UK are subjected to monthly environmental inspections. The environmental inspections are an opportunity for sites to be audited against the main environmental risks in their activities. This is the opportunity to highlight key areas of concern within the business that allow the project teams to set meaningful measures in place to reduce risk that could escalated to near misses or incidents.

Result



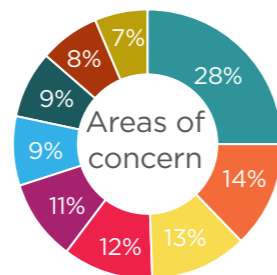
Of the eligible projects that were able to implement these solutions, we had 5 available initiatives listed below and a 67% uptake of the solutions in 2022.

Below are the top areas where non-conformances and system activity deviations were identified in 2022:

- Waste management
- Fuel storage and refuelling areas
- COSHH, storage use and assessments

These three risk areas represent 55% of the total actions raised throughout the environmental inspections.

We must reflect on this data and follow our own Environmental Standards to ensure that compliance is met, reducing environmental risks on site. **In the upcoming year, there will be bespoke training and awareness initiatives focussing on these three key areas in the form of webinars, on-site training and Toolbox Talks.**



- Waste management
- Fuel storage & refuelling areas
- COSHH, storage, use & assessments
- Signage
- Closing actions
- Plant and equipment
- Layout and organisation
- Water runoff, wash out & drainage
- Material storage



Conclusion

Bouygues UK has made significant progress in 2022 in comparison with 2021. As a business, we have gained maturity and perspective in defining what good looks like as well as ascertaining how we will continue to measure and improve on our performance going forward.

The level of environmental awareness within the company has dramatically increased. The traction from our clients, partners, supply chain and staff has indeed accelerated this.

Where we did not fulfil the targets we set out to achieve, we did not let this impede our progress but made all possible efforts to transparently declare these shortcomings and learn from them. Through these lessons learnt, we also made way for genuine reporting and accurate results. This is the first year the inflation rate has been considered within our intensity metrics, giving perspective to what could be seen as a good performance where the reality might show that we all need to progress quicker in order to achieve our ambitions.

We recognise we still have a lot of work to do if we are to reach our targets for 2025, 2030 and beyond. Through close collaboration with our clients, supply chain, employees, and all other stakeholders, I am confident we can continue to deliver high quality projects whilst guaranteeing that building sustainably is an absolute non-negotiable.

Best practices must be pushed into action from the earliest stages of our projects right through completion and beyond. It is key that ambitions and plans are developed right from the outset, allowing us to minimise our impact on the environment around us and leave a positive legacy for the next generation.

At Bouygues UK, every project is an opportunity to build the future and we are committed to making this our reality.



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